

HU : MGSDVRDLNALLPAVPSLGGGGCALPVSGAAQWAPVLDFAAPPGASAYGSL
MO : MGSDVRDLNALLPAVSSLGGGGCGLPVSGAAQWAPVLDFAAPPGASAYGSL

HU : GGPAPPAPPAPPAPPAPPHSFIKQEP SWGGAEPHEEQCLSAFTVHFSGQFTGTAG
MO : GGPAPPAPPAPPAPPAPPHSFIKQEP SWGGAEPHEEQCLSAFTLFSGQFTGTAG

HU : ACRYGPFGPPPPSQASSGQARMFPNAPYLPSCLESQPAIRNQGYSTVTFDGTPS
MO : ACRYGPFGPPPPSQASSGQARMFPNAPYLPSCLESQPTIRNQGYSTVTFDGAPS

HU : YGHTPSHAAQFPNHSFKEDPMGQQGSLGEQQYSVPPPVGCHTPTDCTG
MO : YGHTPSHAAQFPNHSFKEDPMGQQGSLGEQQYSVPPPVGCHTPTDCTG

HU : SQALLRTPYSSDNLYQM TSQLECMTNQMNLGATLKGVAAGSSSVKWTE
MO : SQALLRTPYSSDNLYQM TSQLECMTNQMNLGATLKGMAAGSSSVKWTE

HU : GQSNHSTGYESDNHTP ILCGAQYRIHTHGVFRGIQDVRRVPGVAPTLVRSAS
MO : GQSNHGIGYESDNHTP ILCGAQYRIHTHGVFRGIQDVRRVSGVAPTLVRSAS

HU : ETSEKRPFMCAYPGCNKRYFKLSHLQMHSRKHTGEKPYQCDFKDCERRFSR
MO : ETSEKRPFMCAYPGCNKRYFKLSHLQMHSRKHTGEKPYQCDFKDCERRFSR

HU : SDQLKRHQRRHTGVKP FQCKTCQRKF SRSDHLKTHTRHTGKTSEKPFSCR
MO : SDQLKRHQRRHTGVKP FQCKTCQRKF SRSDHLKTHTRHTGKTSEKPFSCR

HU : WPSCQKXFARSDELVRHEENMHQRNMTKLQLAL
MO : WHSCQKXFARSDELVRHEENMHQRNMTKLHVAL

Express Mail No.: EL897856824US

Title: COMPOSITIONS AND METHODS FOR WT1 SPECIFIC IMMUNOTHERAPY
Inventors: Alexander Gaiger et al. Serial No. Not yet assigned Docket No.: 210121.465C5

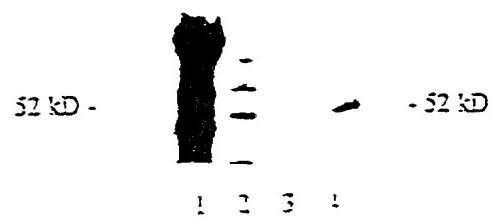


FIG. 2

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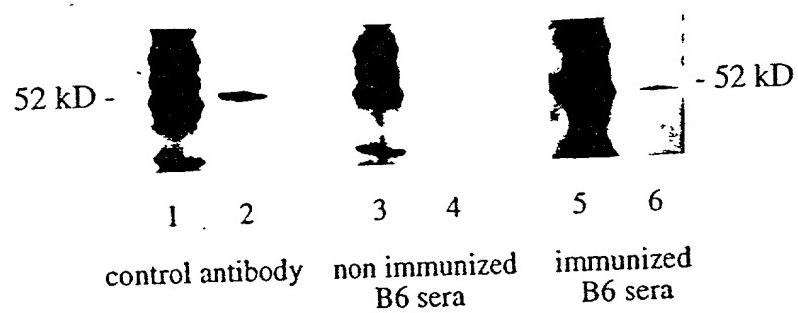


FIG. 3

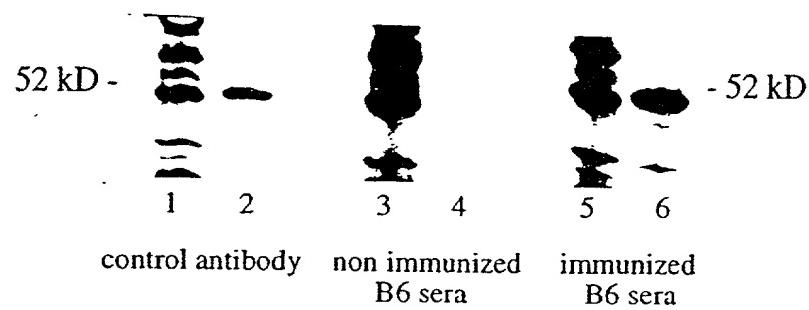


FIG. 4

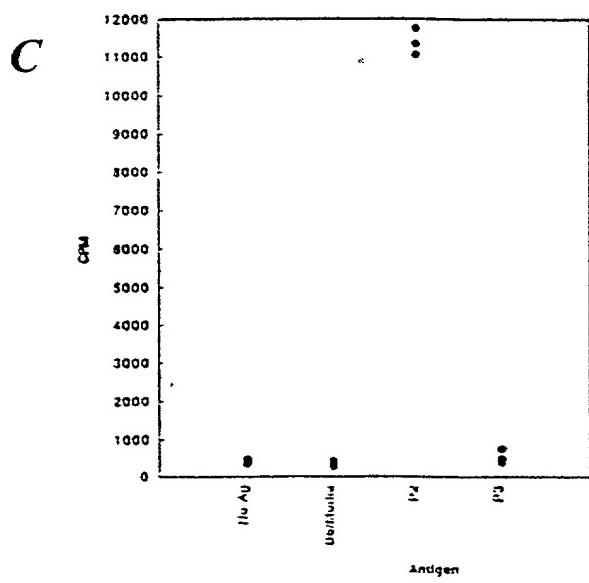
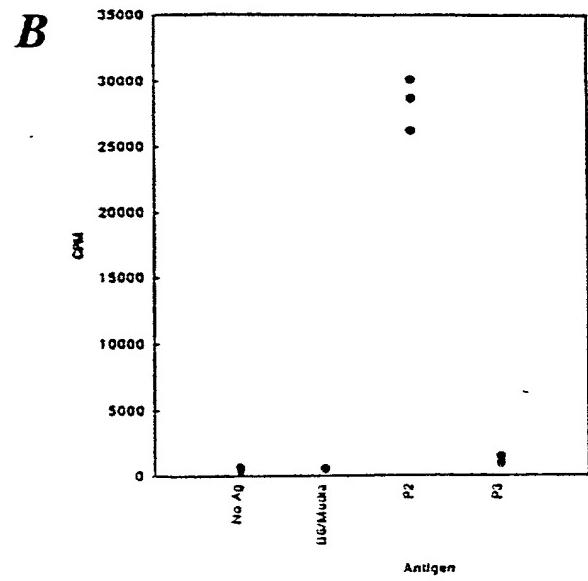
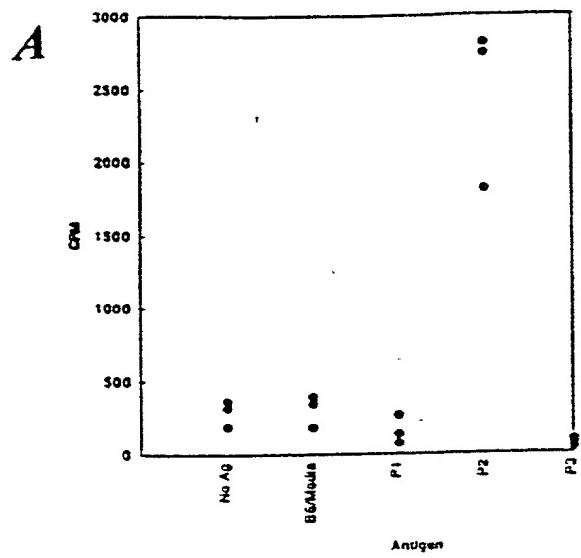
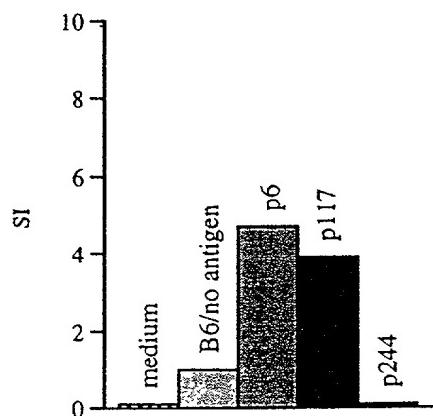
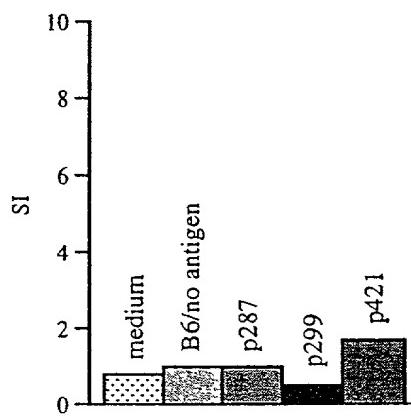
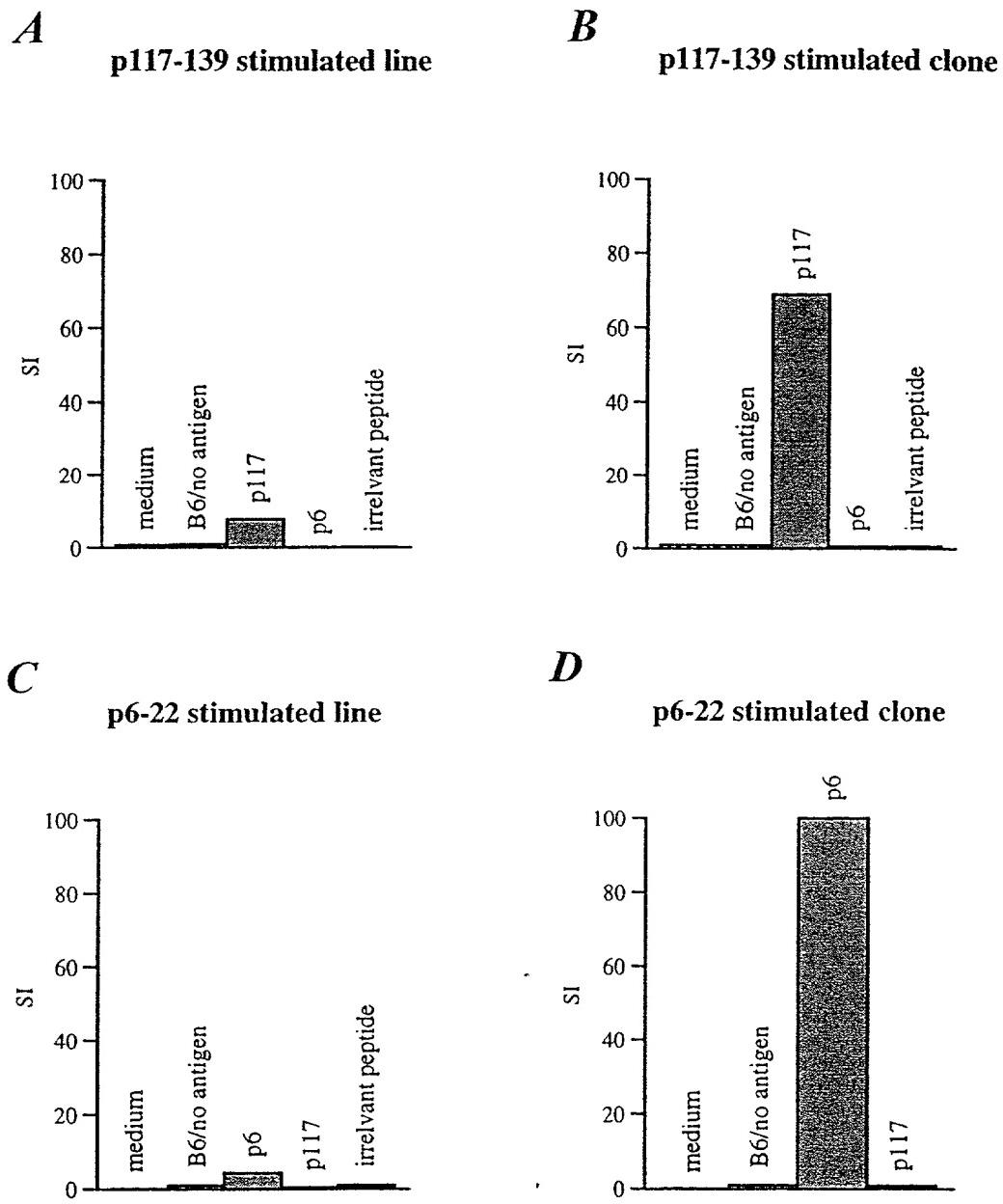


FIG. 5A-5C

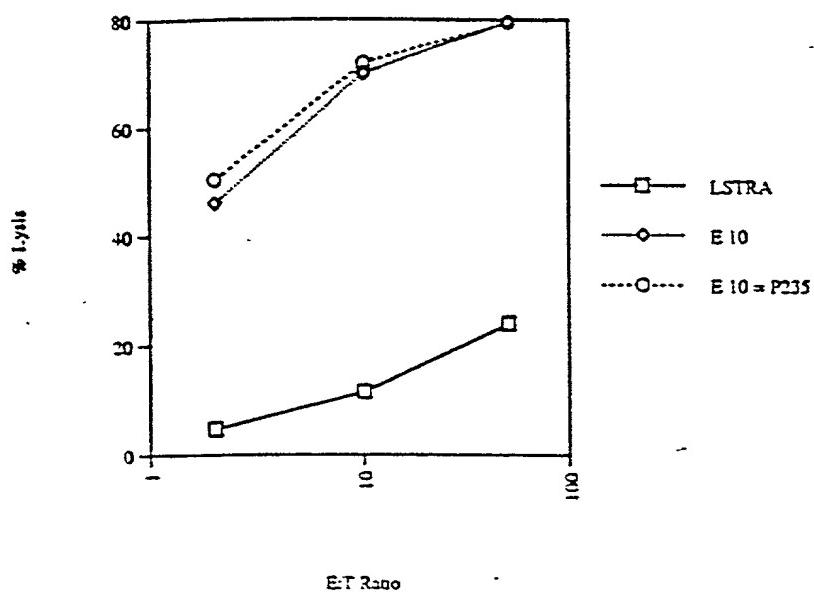
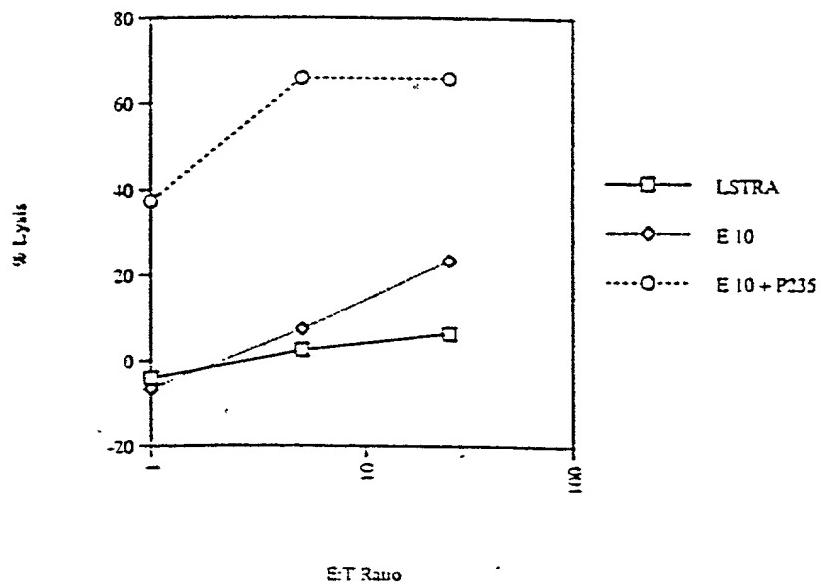
A**Vaccine A stimulated line****B****Vaccine B stimulated line****FIG. 6A and 6B**

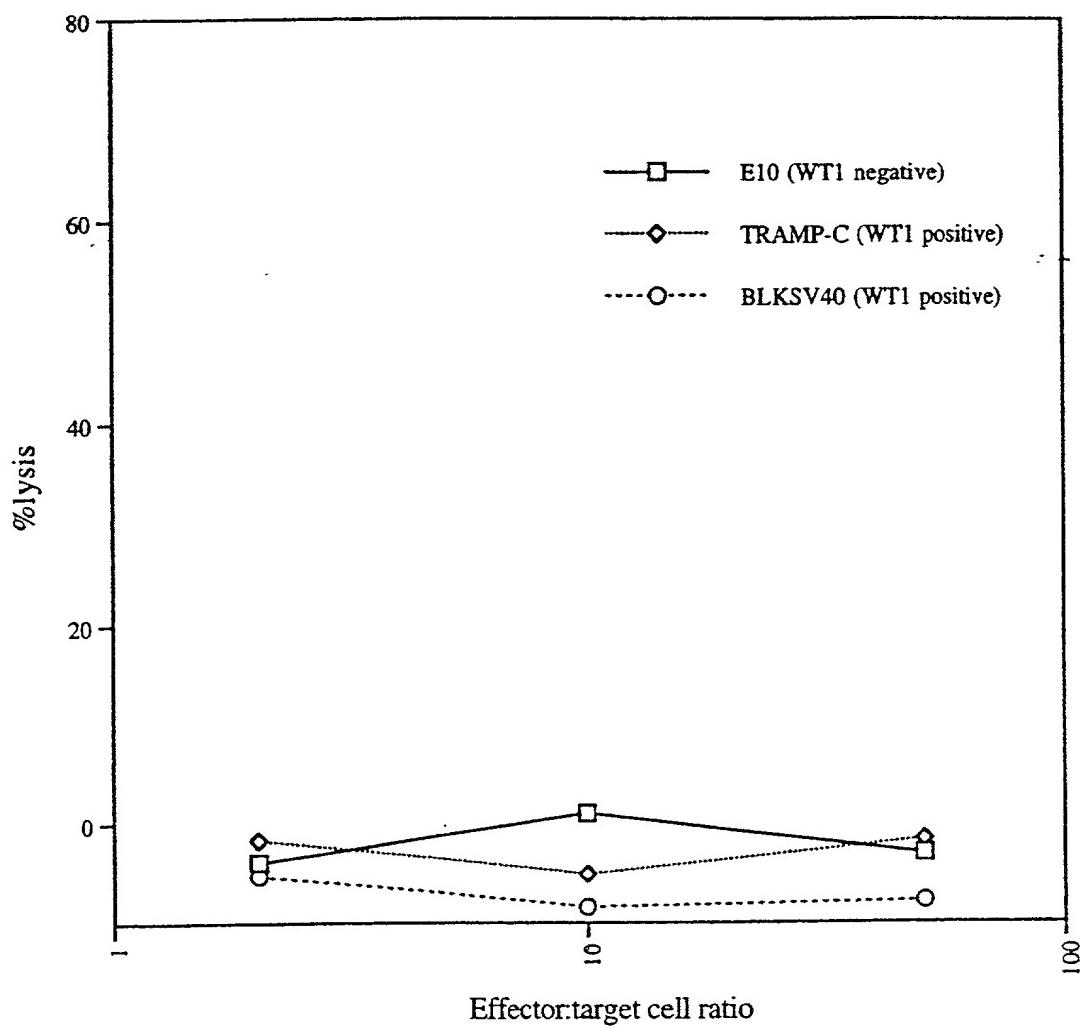
**FIG. 7A-7D**

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75
MGSDVRDLNALLPAVPSLGGGGCALPVSGAAQWAPVLDFAAPPGASAYGSLGGPAPPPAPPPPPPHSFIKQE
.....AAAAAAA.....AAAAA.....AAAAAAA.....
.....RRRR.....
.....
.....
80 85 90 95 100 105 110 115 120 125 130 135 140 145 150
PSWGGAEPHEEQCLSAFTVHFSGQFTGTAGACRYGPFGPPPSQASSQARMFPNAPYLPSCLESQPAIRNQGYS
.....AAA.....AAAA.....AAA.....AAAAA.....
.....RRRR.....RRRRR.....
.....DDDDDDDD.....
.....
155 160 165 170 175 180 185 190 195 200 205 210 215 220 225
TVTFDGTPSYGHTPSHHAAQFPNHSFKHEDPMGQQGSLGEQQYSVPPPVGCHTPDSCSQALLRTPYSSDN
.....AAAAA.....AAAAA.....AA
.....RRRR.....
.....DDDDDDDDDDDDDD.....
.....
230 235 240 245 250 255 260 265 270 275 280 285 290 295 300
LYQMITSQLECMTWQMNLGATLKGVAGSSSVKWTGQSNHSTGYESDNHTTPILCGAQYRIHTHGVFRGIQDV
.....AAAAAAA.....AAA.AAA.....AAAAAAA.....
.....RRRRRRRRR.....RRRR.....RRR.....
.....DDDDDD.....DDDDDDDDDD.....ddddd.....
.....
305 310 315 320 325 330 335 340 345 350 355 360 365 370 375
RRVPGVAPTLVRSASETSEKRPFMCAYPGCNKRYFKLSHQMHRSRKHTGEKPYQCDFKDCERRFSRSRSDLQLKRHQR
.....AAAAA.....AAAAAAA.....AAAAA.....AAAAA.....AAAAA.....
.....RRRR.....RRRR.....
.....DDDDDD.....
.....
380 385 390 395 400 405 410 415 420 425 430 435 440 445 450
RHTGVKFQCKTCQRKFSRSDHLKTHTRHTGKTSEKPFSCRWPSCQKKFARSDELVRHHNMHQRNMTKLQLAL
.....AAA.....AAA.....AA.....AAA.....AAA.....AAAAAAA.....AAA.....
.....RRRR.....RRRR.....
.....
.....ddddd.....

FIG. 8A

FIG. 8B

A**B****FIG. 9A and 9B**

**FIG. 10A**

Title: COMPOSITIONS AND METHODS FOR WT1 SPECIFIC IMMUNOTHERAPY
Inventors: Alexander Gaiger et al.
Express Mail No.: EL89785624US
Serial No. Not yet assigned
Docket No.: 210121,465CS

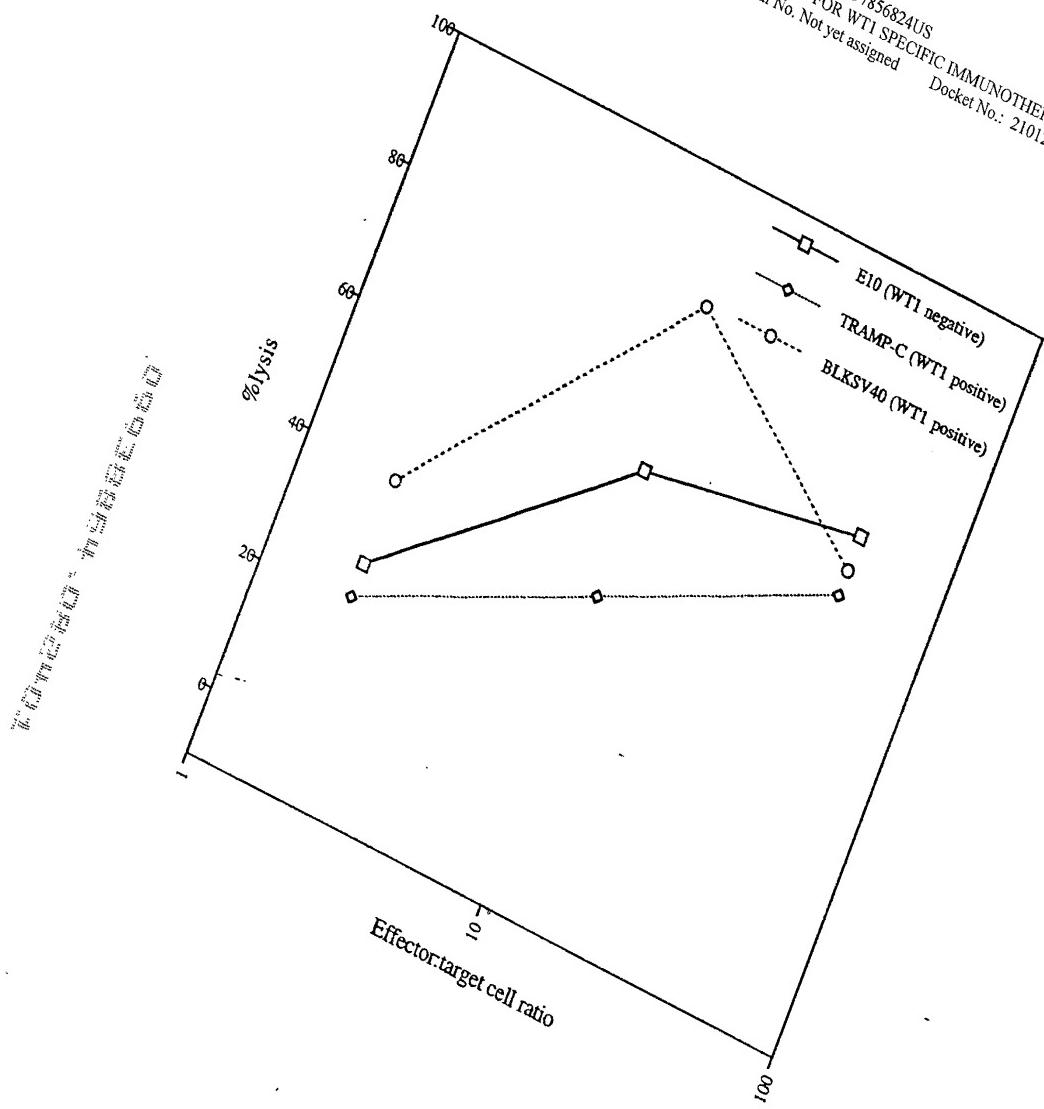


FIG. 10B

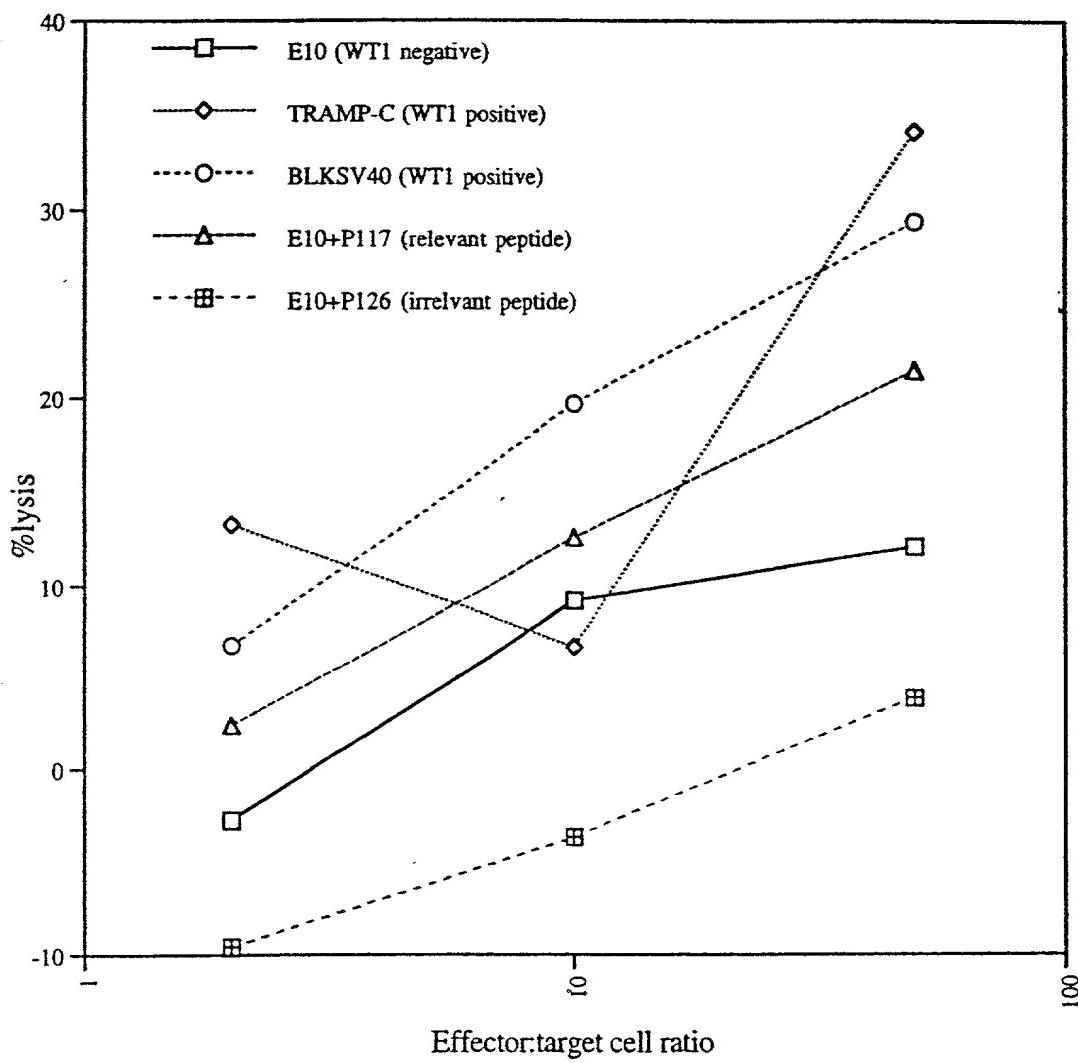


FIG. 10C

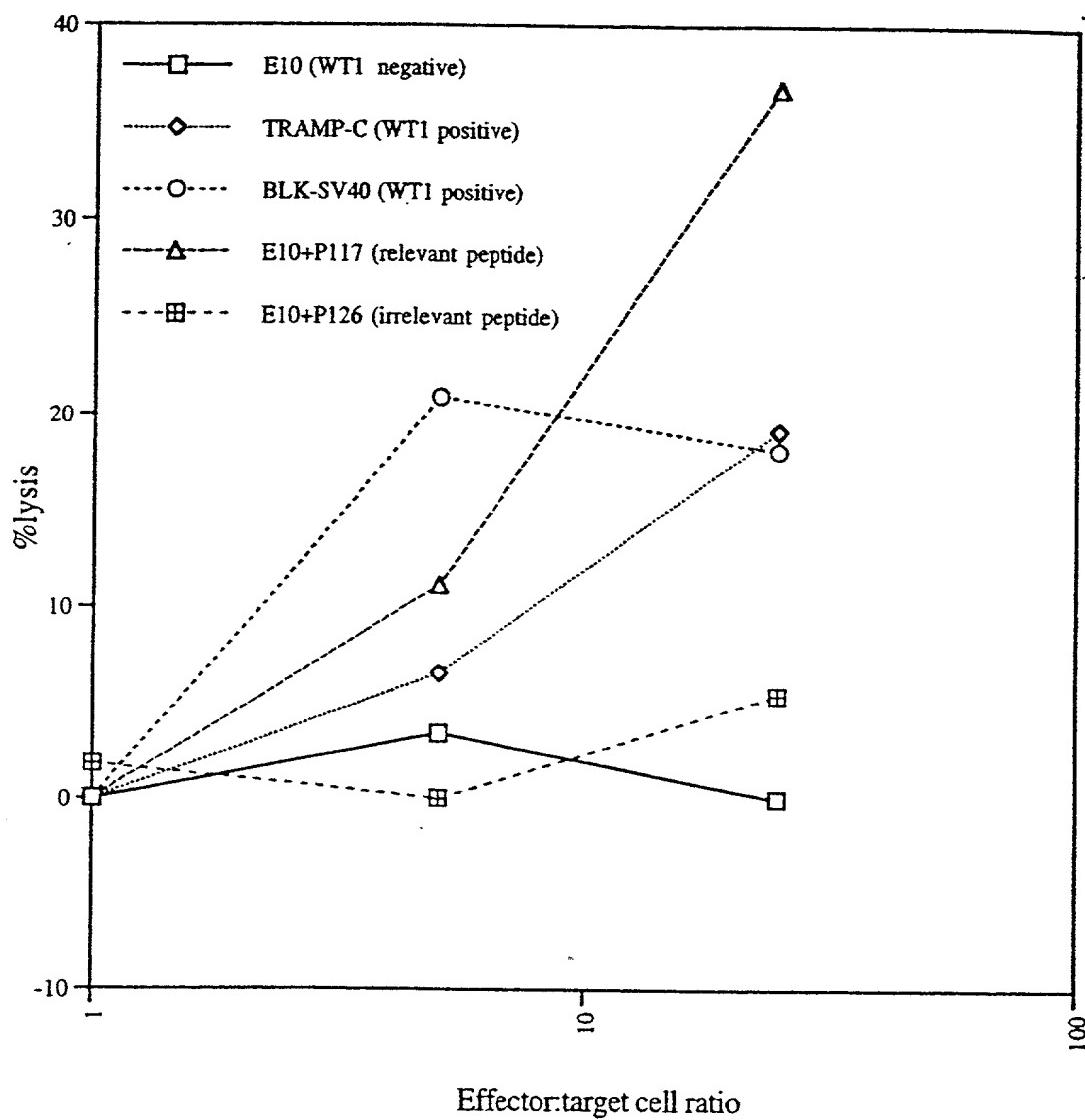
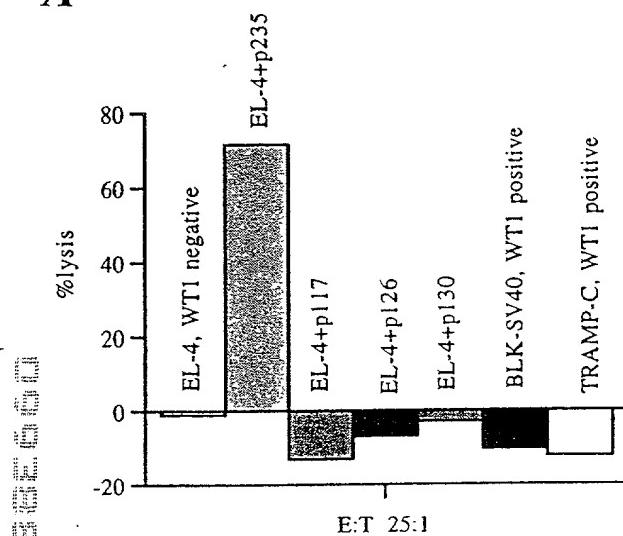
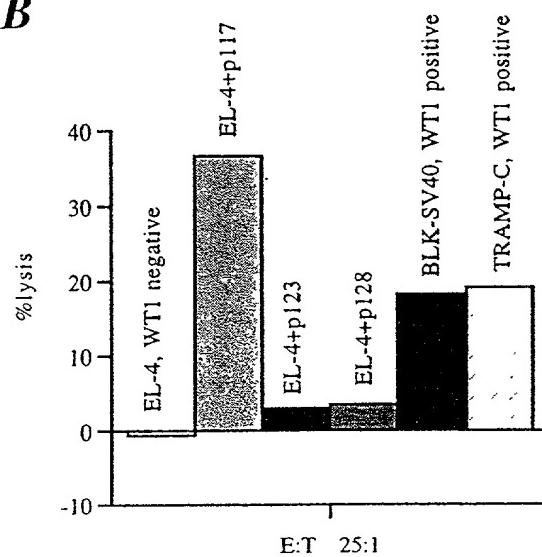
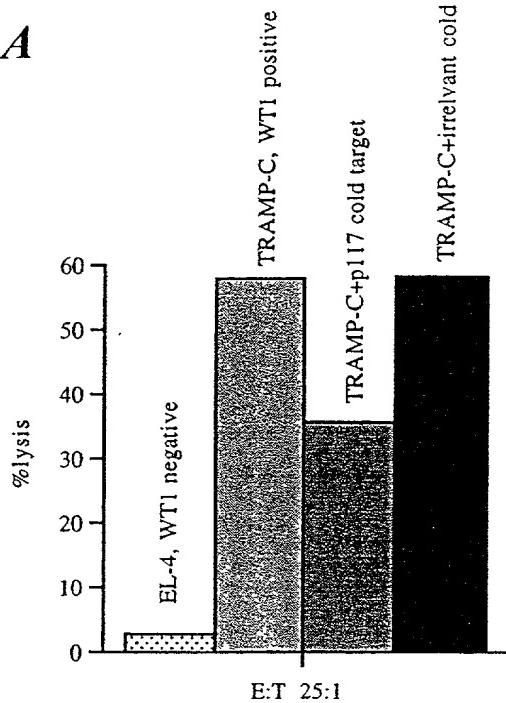
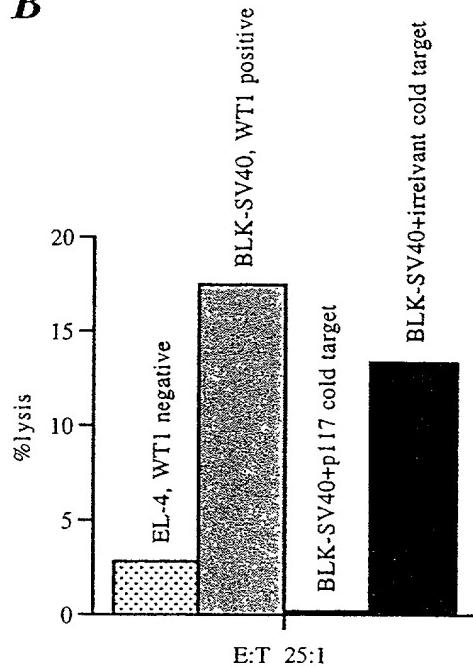
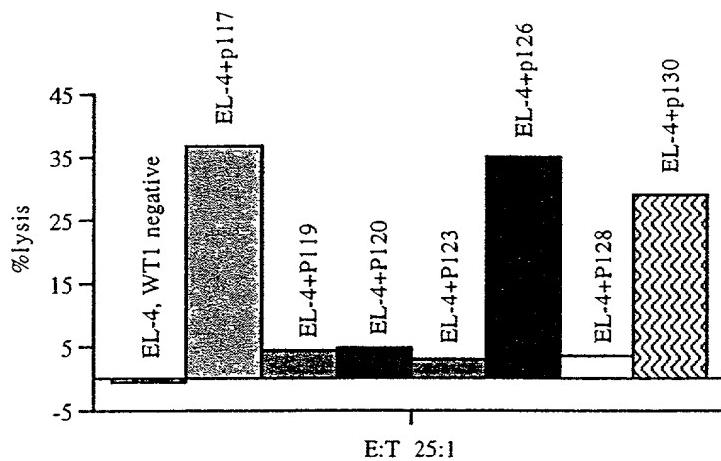
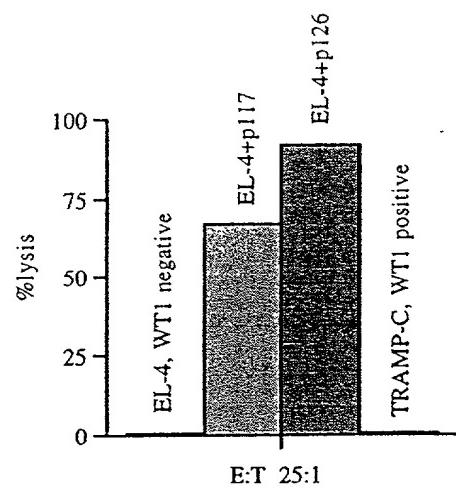
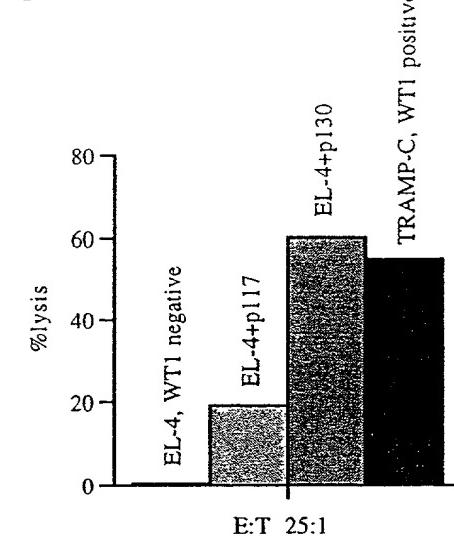


FIG. 10D

A**B*****FIG. 11A and 11B***

A**B****FIG. 12A and 12B**

A**B****C*****FIG. 13A-13C***

Express Mail No.: EL897856824US

Title: COMPOSITIONS AND METHODS FOR WT1 SPECIFIC IMMUNOTHERAPY
Inventors: Alexander Gaiger et al. Serial No. Not yet assigned Docket No.: 210121.465C5

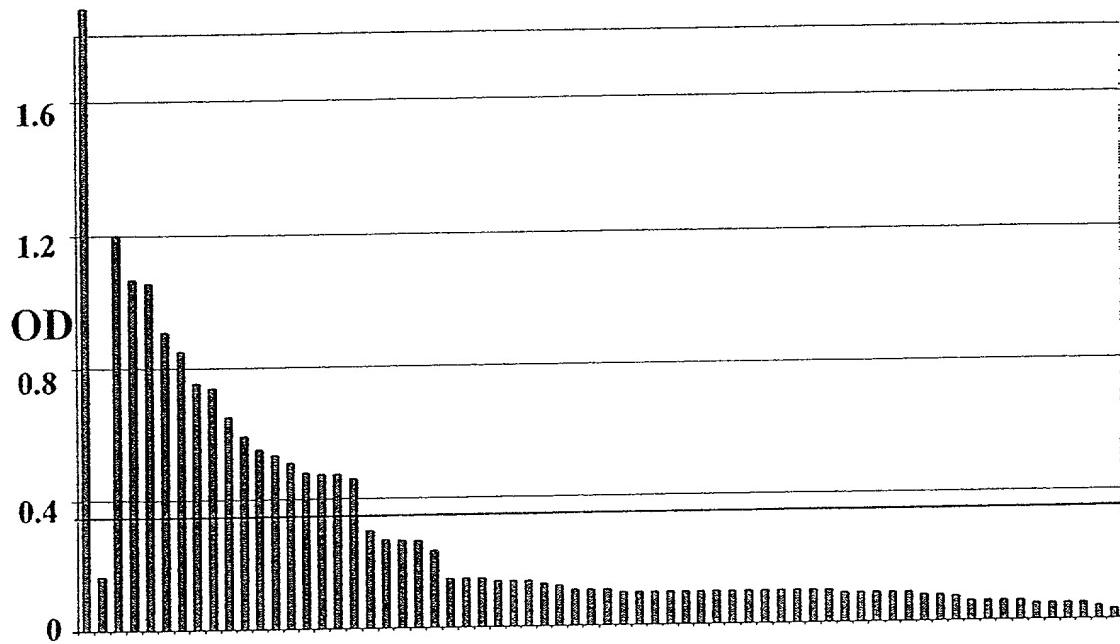


Fig. 14

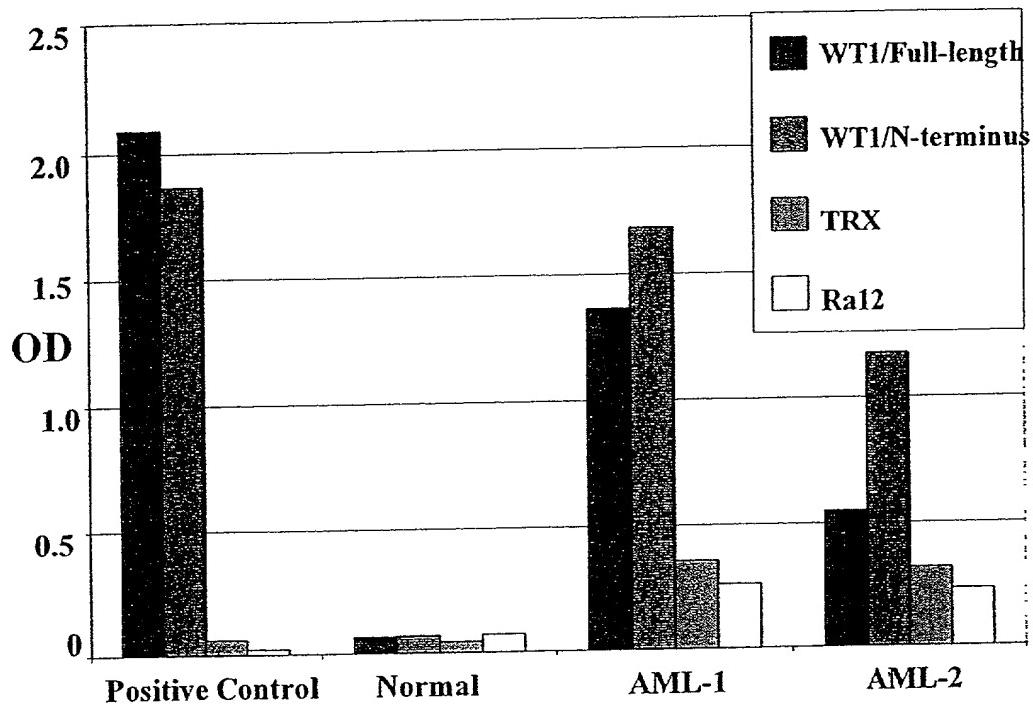


Fig. 15

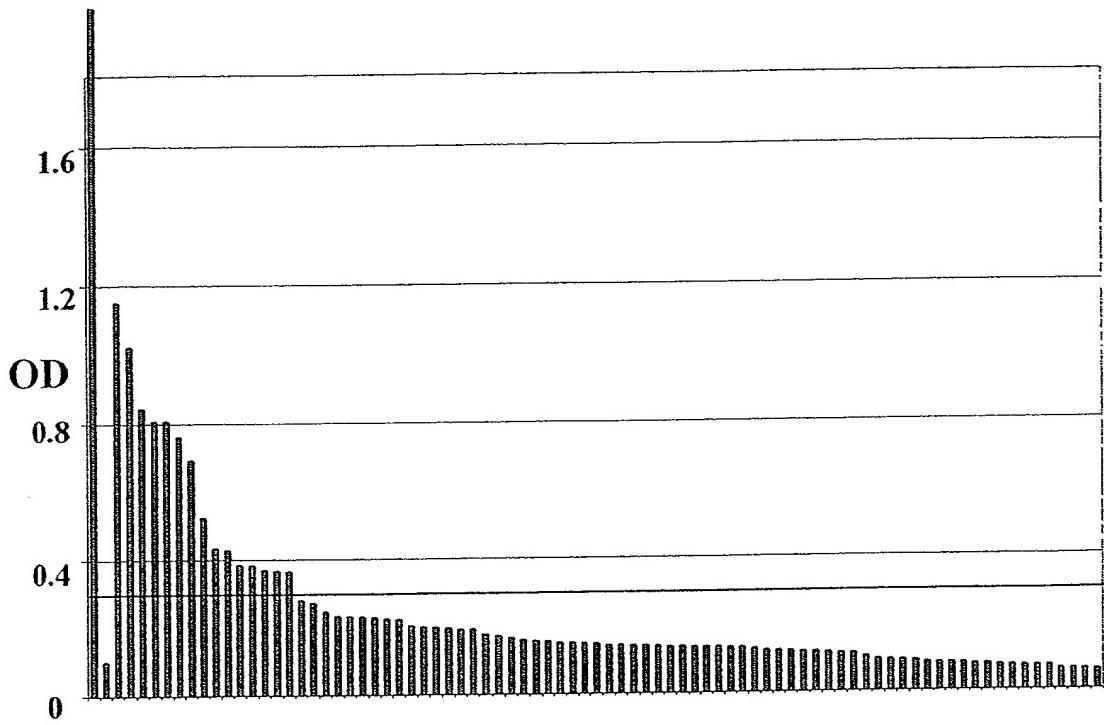


Fig. 16

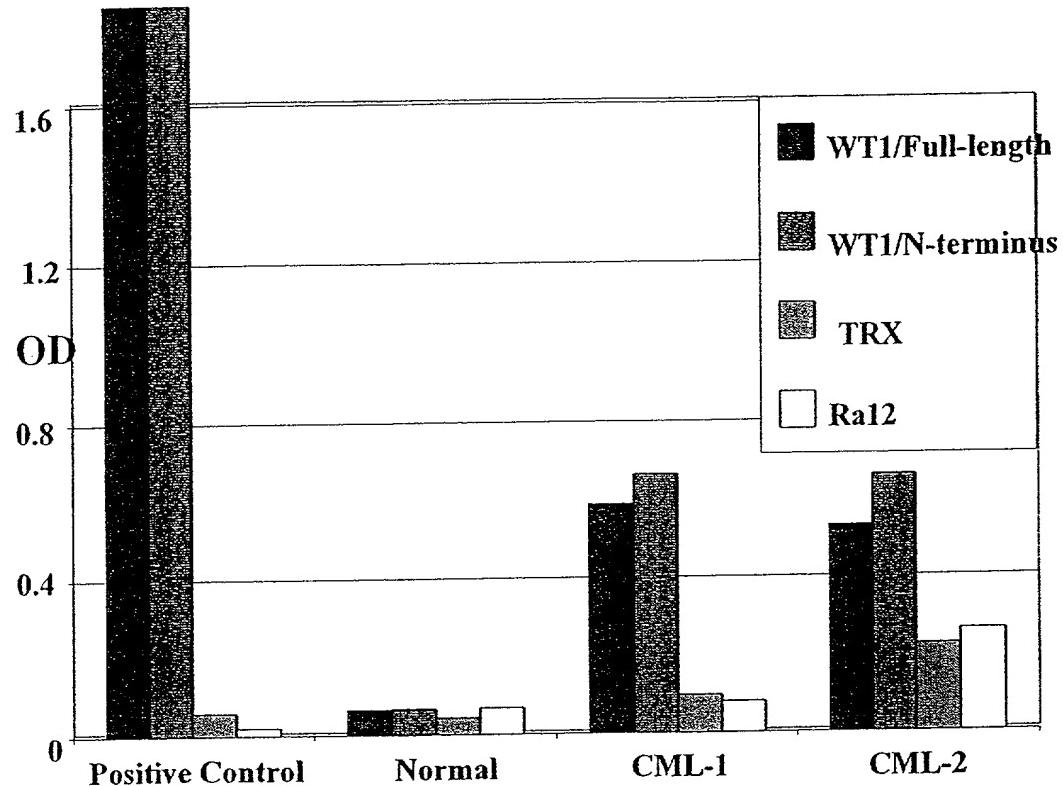


Fig. 17

21

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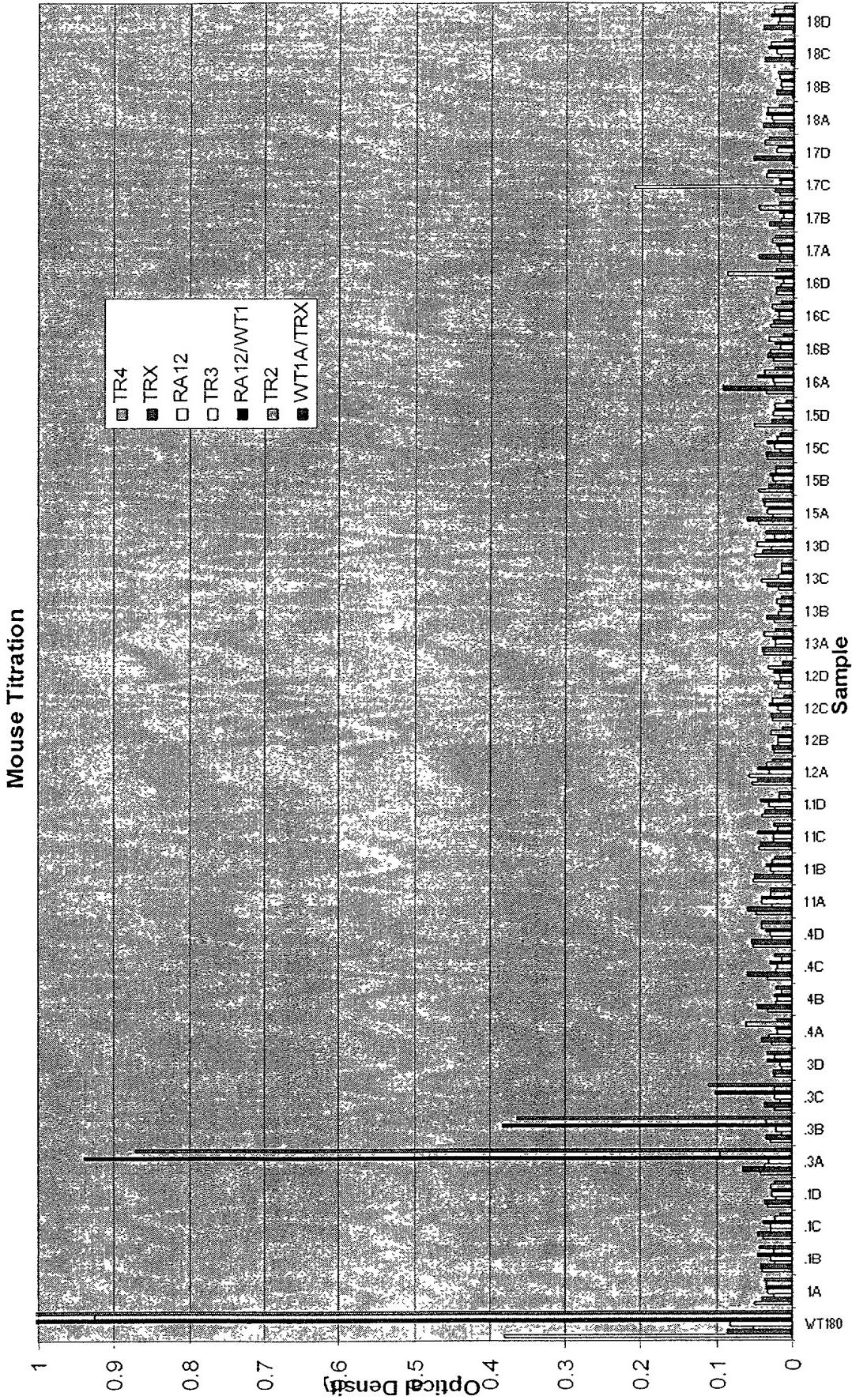
Title: COMPOSITIONS AND METHODS FOR WT1 SPECIFIC IMMUNOTHERAPY
Inventors: Alexander Gaiger et al. Serial No. Not yet assigned Docket No.: 210121.465C5

TABLE 1: Characteristics of Recombinant WT1 Proteins Used for Serological Analysis

Name	Recombinant Protein	WT1 Amino Acid Position	Molecular Weight
WT1/full-length	Rα12-WT1 full length fusion protein	aa 1-449	85kDa
WT1/N-terminus	TRX-WT1 N-terminus fusion protein	aa 1-249	60kDa
WT1/C-terminus	WT1 C-terminus protein	aa 267-449	50kDa

Fig. 18

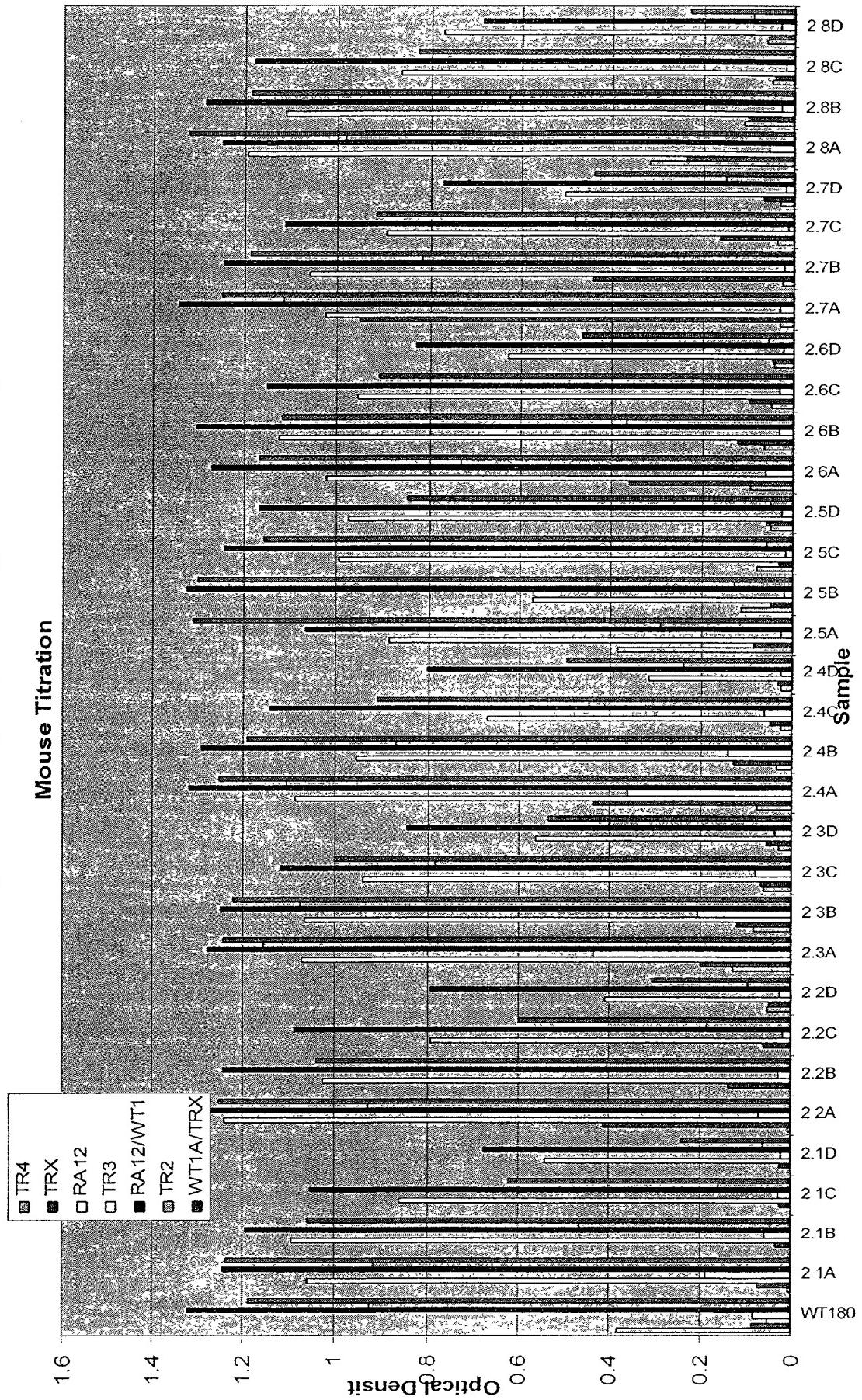
CID000622 Figure 1a Ab responses in group 0 and 1 (controls)



Control groups. A: 1:500 Dilution, B: 1:2000, C: 1: 8000, D: 1:16000

FIG. 19 A

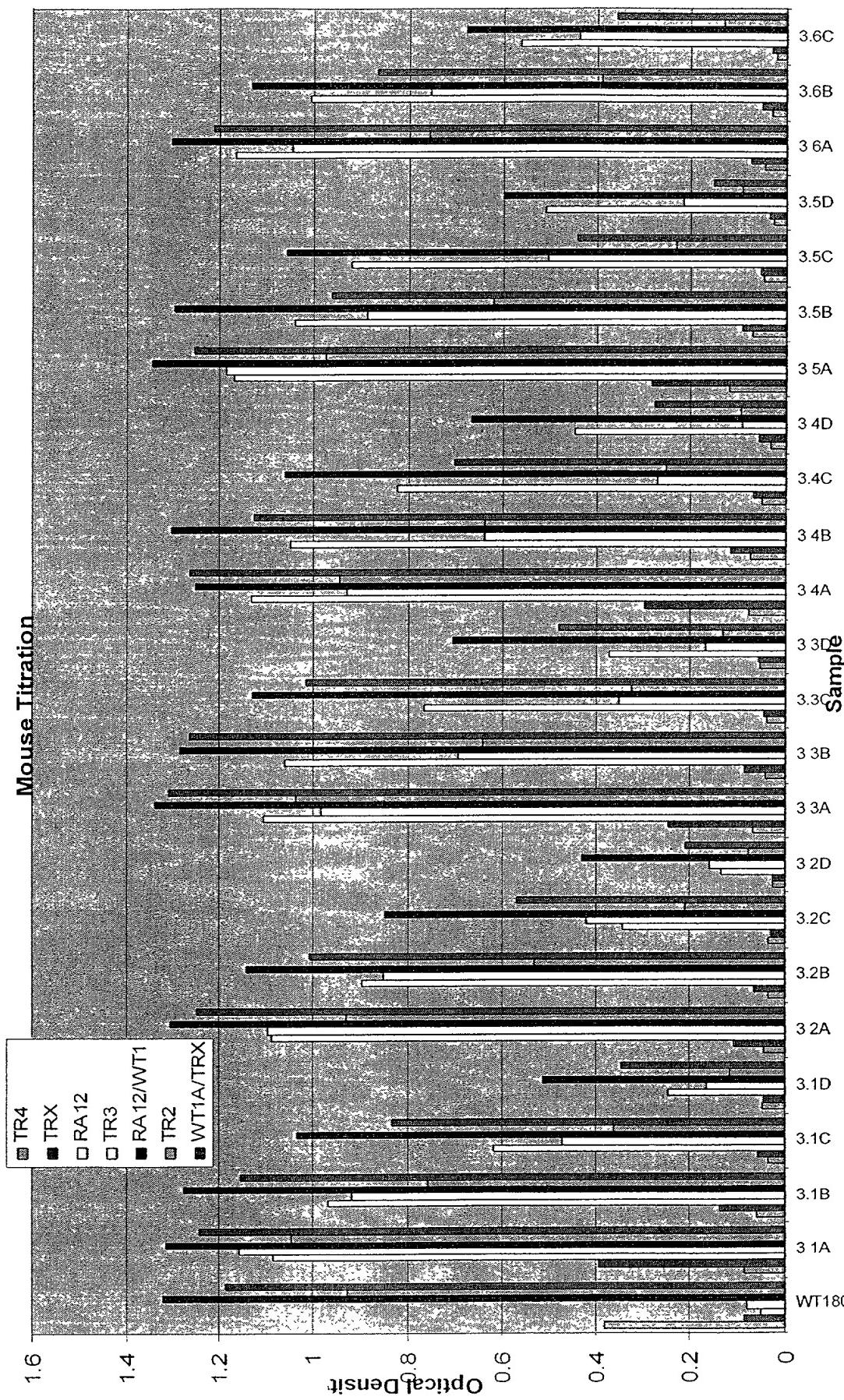
CID000622 Figure 1b. Ab responses in group 2 (25ug Ra12/WT1)



25ug Ra12/WT1+MPL-SE, A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000

FIG. 19B

CID000622 Figure 1c. Ab responses in group 3 (100ug Ra12/WT1)

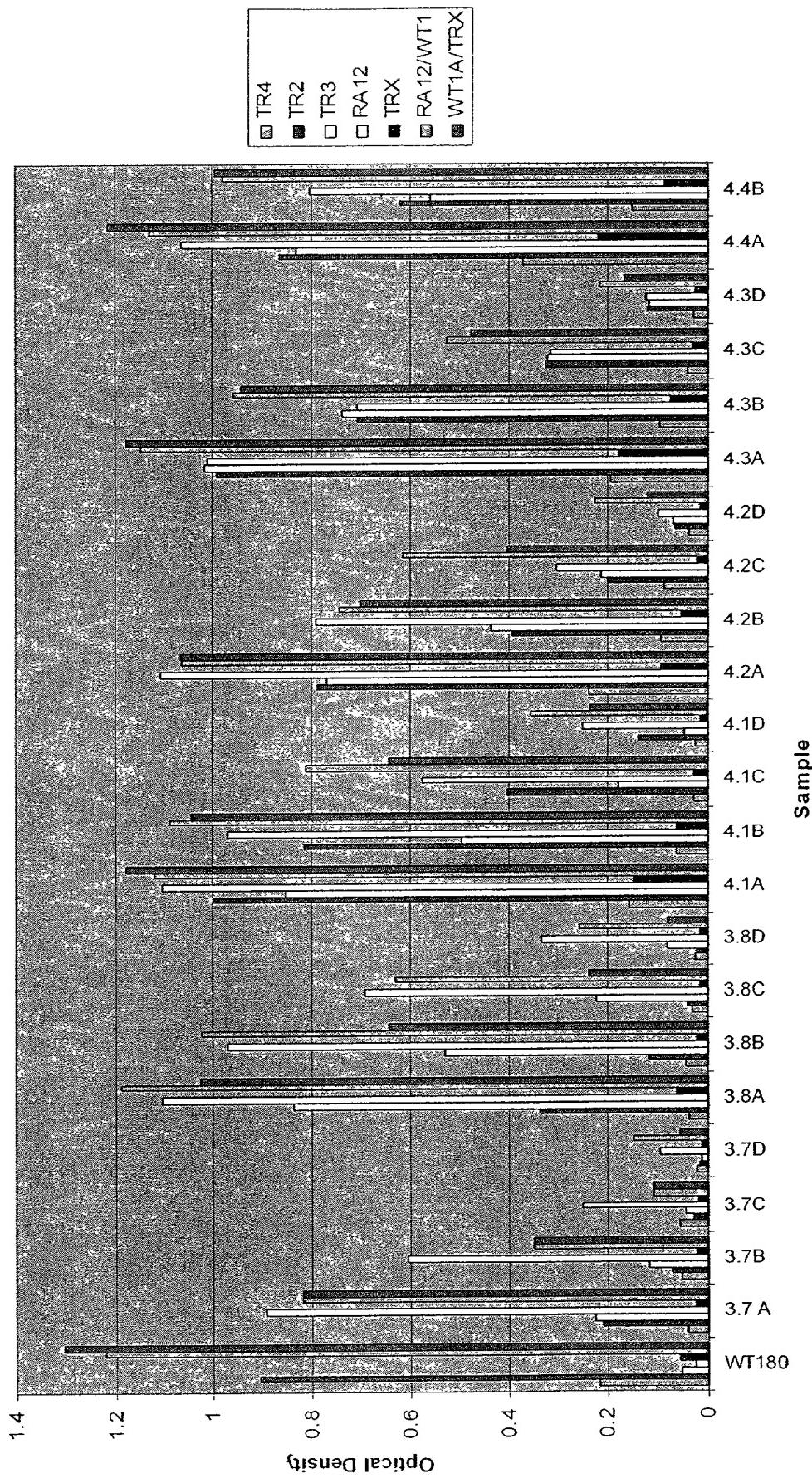


WT1. Dose Titration. Ab responses to WT1. 100ug Ra12-WT1+MPL-SE. A: 1:500 Dilution, B: 1:2000, C: 1:8000,
D: 1:16000

FIG. 1aC

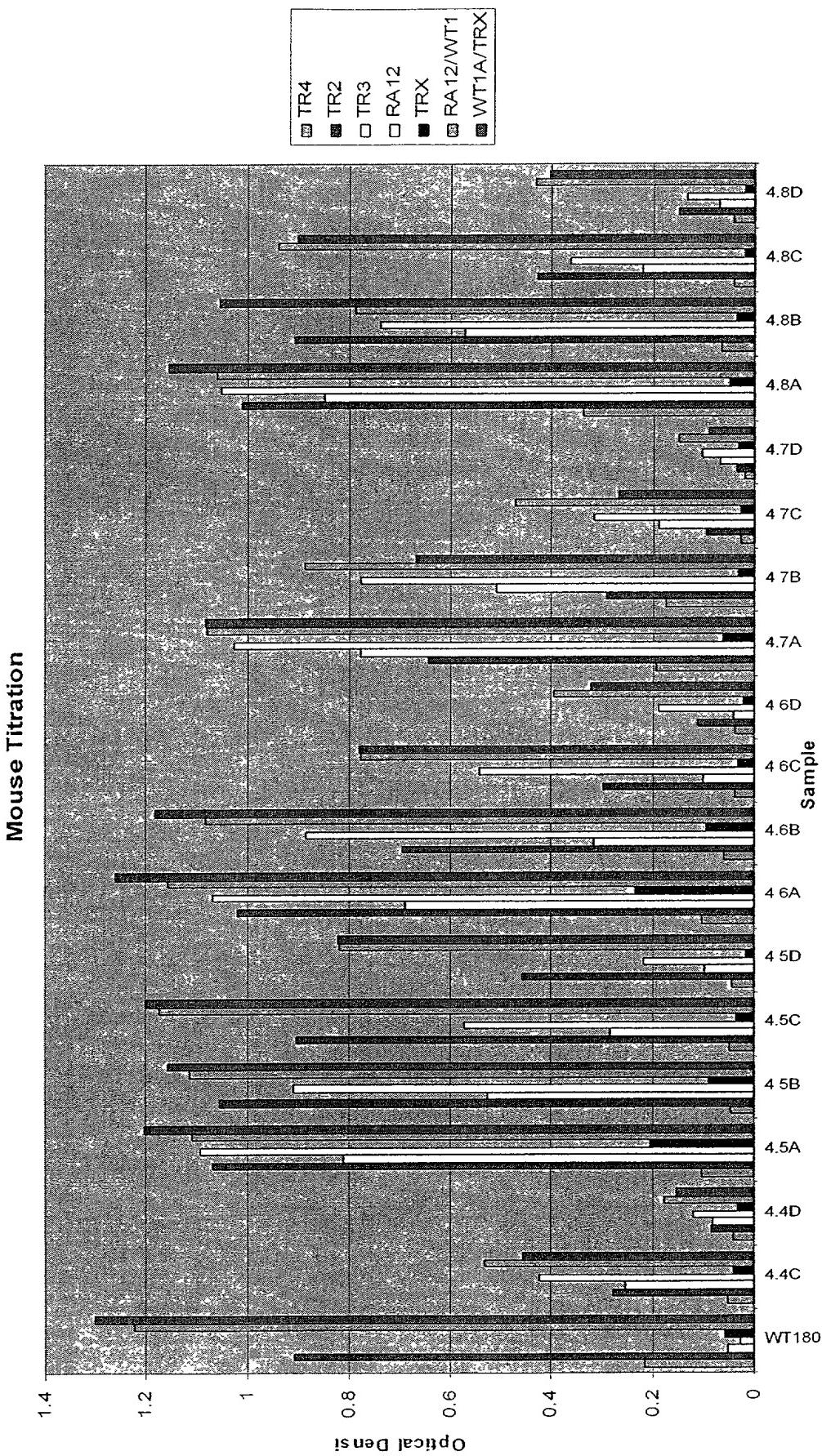
CID000622 Figure 1d. Ab responses in groups 3 and 4 (1000ug Ra12/WT1)

Mouse Titration



WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE. A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000

Fig. 1d



WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE. A: 1;500 Dilution,
B: 1:2000, C: 1: 8000, D: 1:16000

Figure 1e. Ab responses in group 4 (1000ug Ra12/WT1)

Figure 2a. Proliferative T-cell responses in WT1 protein immunized mice.
(Ra12WT1 dose titration, 3x in vivo, after 2IVS)

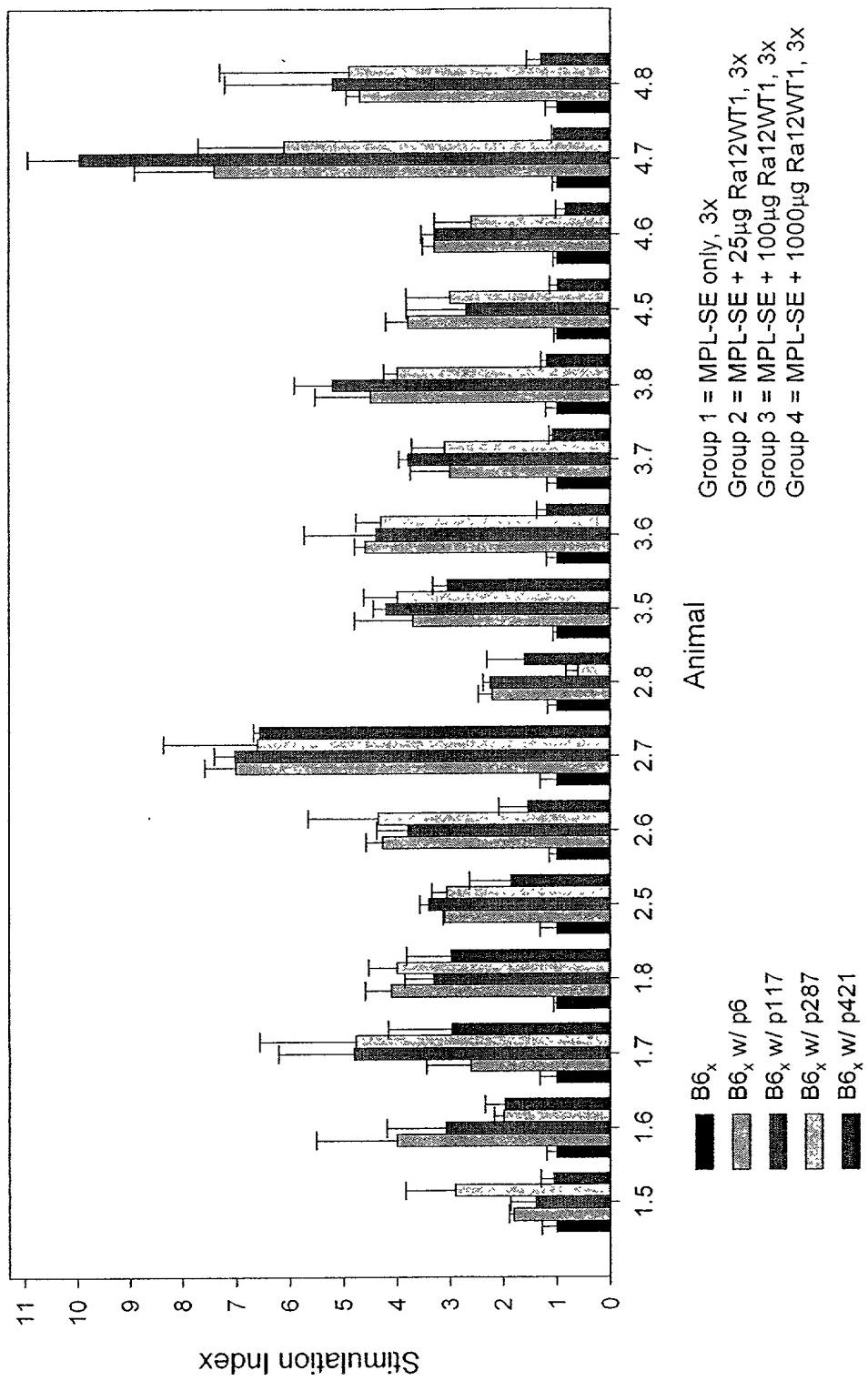


FIG. 20 A

Figure 2b. Proliferative T-cell responses in WT1 protein immunized mice
(Ra12WT1 dose titration, 6x in vivo, after 2IVS)

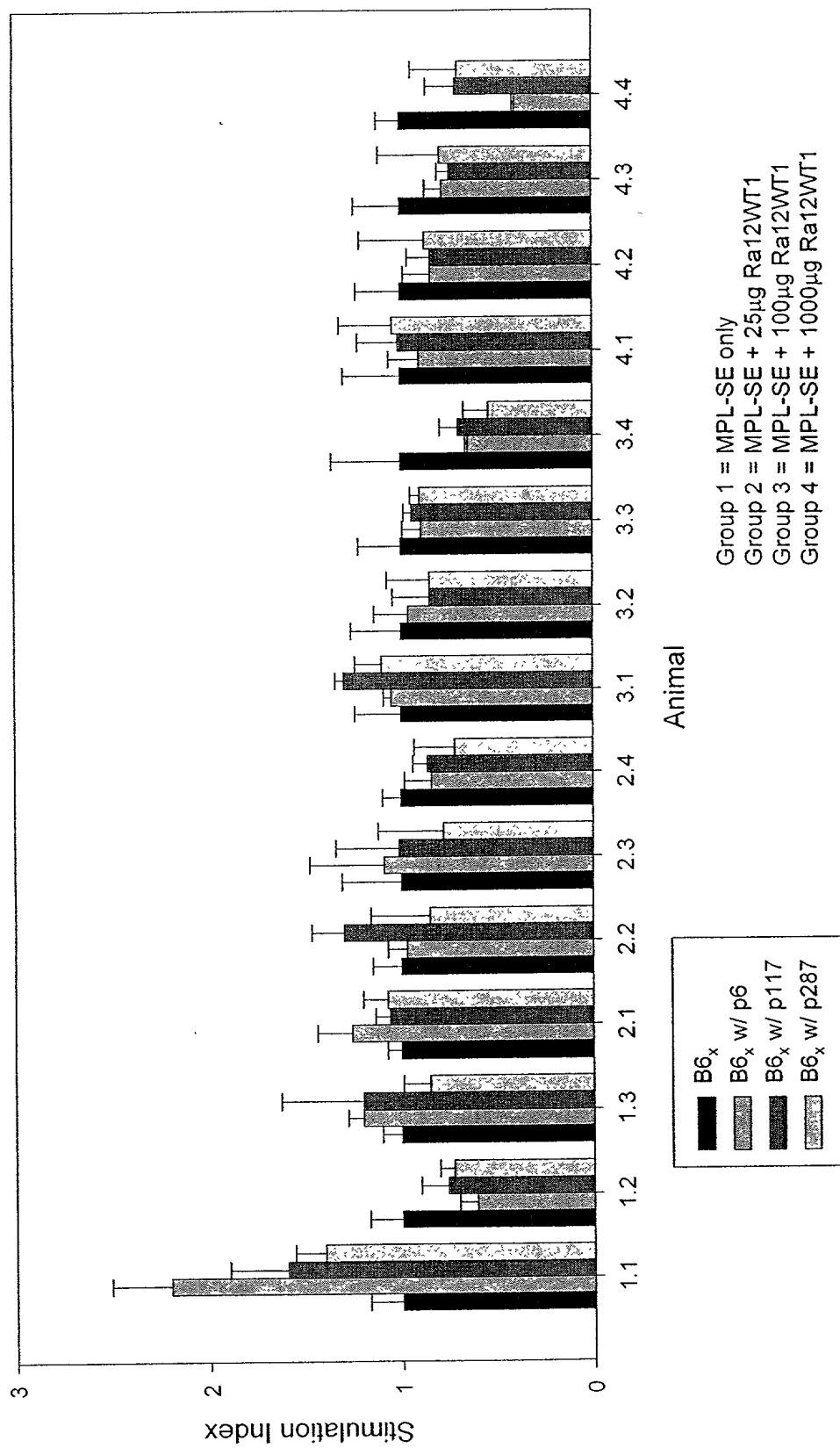


Fig. 2b

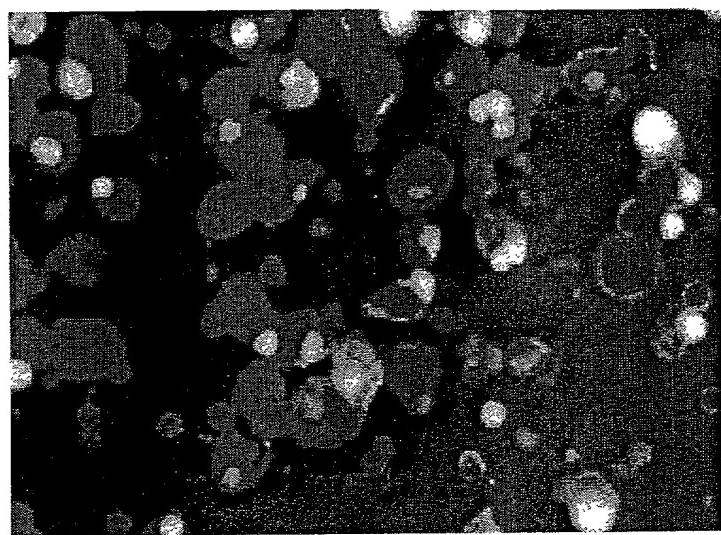
FIG. 21

Figure 1. WT1 expression in human DC following adeno WT1 and Vaccinia WT1 infection

**Control
(uninfected
human DC)**



**Adeno WT1
infected human
DC**



**Vaccinia WT1
infected human
DC**

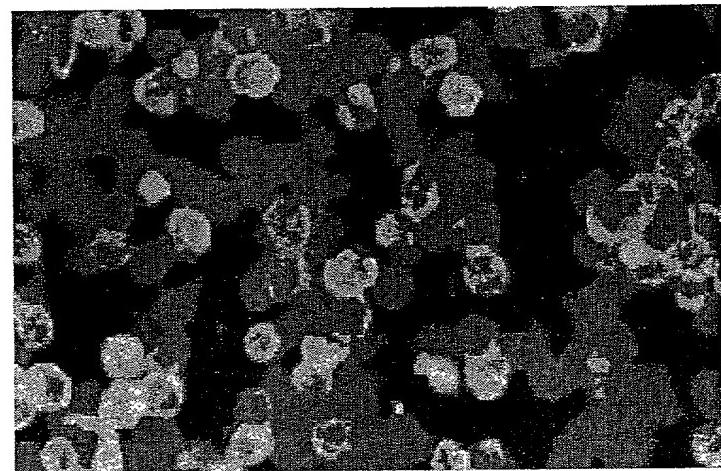
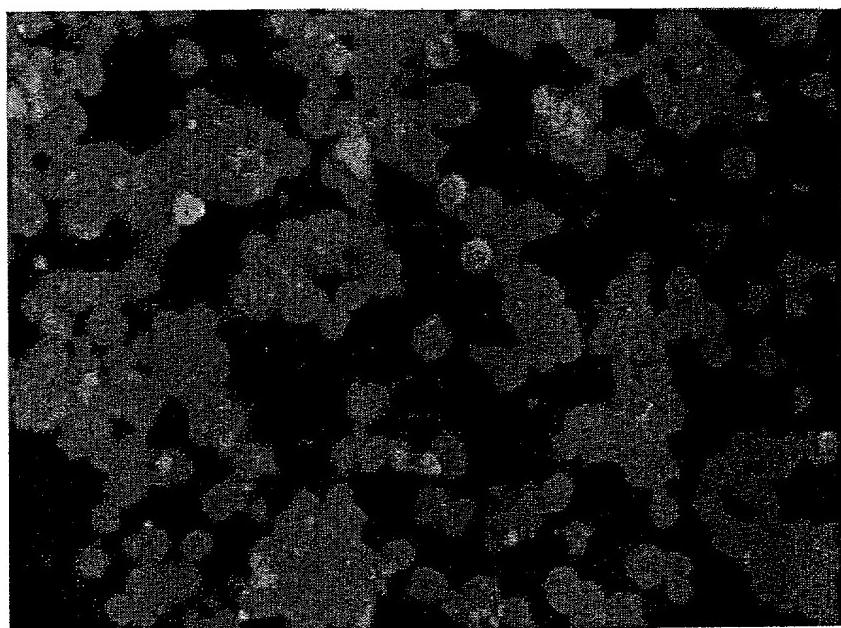


FIG. 22

Figure 2. WT1 can be expressed reproducible in human DC following adeno WT1 infection and is not induced by a control Adeno infection

Control
(Adeno EGFP
infected
human DC)



Adeno WT1
infected human
DC

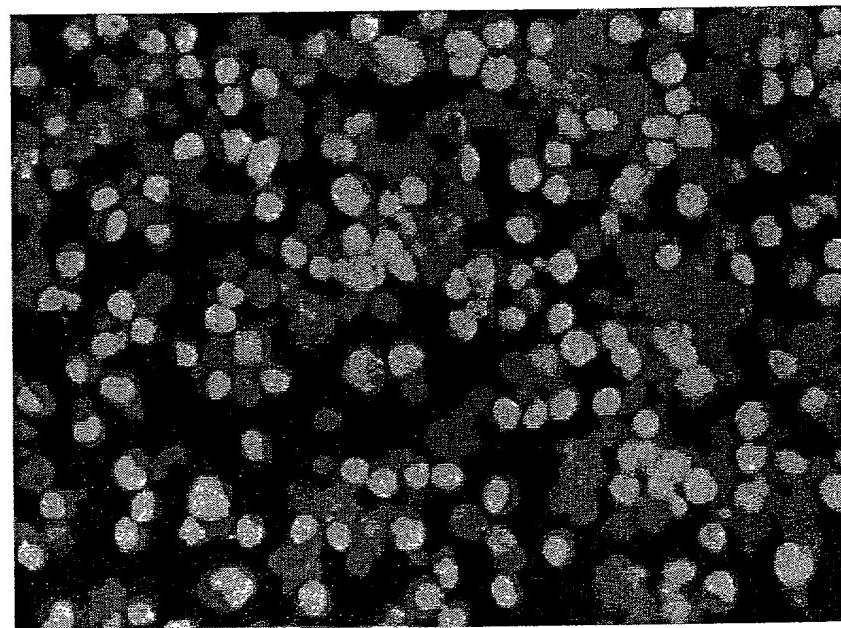


FIG. 23

Figure 3 WT1 whole gene in vitro priming elicits WT1 specific T-cell responses (IFN-gamma ELISPOT)

